

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Shunpei Yamazaki, et al. Art Unit : 1722
Serial No. : 09/892,225 Examiner : Mathew J. Song
Filed : June 25, 2001 Conf. No. : 1969
Title : SEMICONDUCTOR DEVICE AND FABRICATION METHOD THEREFOR

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1/8/2007

REPLY TO ACTION OF SEPTEMBER 20, 2006

Claims 5-7, 15-19, 23, 29-31 and 35-68 are pending in this application, with claims 5, 6, 15, 16, 35, 36, 39 and 40 being independent.

Independent claims 5, 6, 35, 36, 39 and 40, along with their dependent claims 7, 23, 37, 38 and 41, have been rejected as being unpatentable over Noguchi (JP 04-168769) in view of Shimizu (U.S. Patent No. 5,753,541) or Tsutsu (U.S. Patent No. 6,118,151).

Each of the independent claims recites a method of manufacturing a semiconductor device that includes, among other features, forming a first amorphous semiconductor film that includes silicon and germanium "wherein a concentration of the germanium is within a range of 0.1 atom% to 10 atom%" and "forming a second amorphous semiconductor film ... so that a combined thickness of the first and second amorphous semiconductor films is within a range of 20-100 nm" (emphasis added).

Applicants request reconsideration and withdrawal of the rejections of claims 5, 6, 35, 36, 39 and 40, and their dependent claims, because neither Noguchi, Shimizu, Tsutsu, nor any proper combination of the three describes or suggests forming a first amorphous film of silicon and germanium with a concentration of the germanium within a range of 0.1 atom% to 10 atom% and forming a second amorphous semiconductor film so that a combined thickness of the first and second amorphous semiconductor films is within a range of 20-100 nm.

In the response to the Office Action of March 9, 2006, applicants stated the following in support of the request that these rejections be withdrawn:

"The Examiner acknowledges that the combination of Noguchi and Shimizu and the combination Noguchi and Tsutsu do not explicitly disclose the feature of forming the recited amorphous film of silicon and germanium with a concentration of the germanium